

## ABSTRACT OF THE DISCLOSURE

Provided are an aqueous dispersion for chemical mechanical polishing, which planarizes a surface to be polished and has high shelf stability, a chemical mechanical polishing process excellent in selectivity when surfaces of different materials are polished, and a production process of a semiconductor device.

A first aqueous dispersion contains a water-soluble quaternary ammonium salt, an inorganic acid salt, abrasive grains and an aqueous medium. A second aqueous dispersion contains at least a water-soluble quaternary ammonium salt, another basic organic compound than the water-soluble quaternary ammonium salt, an inorganic acid salt, a water-soluble polymer, abrasive grains and an aqueous medium. The second aqueous dispersion is composed of a first aqueous dispersion material (I) obtained by mixing a water-soluble quaternary ammonium salt and an inorganic acid salt into an aqueous medium, and a second aqueous dispersion material (II) obtained by mixing a water-soluble polymer and another basic organic compound than the water-soluble quaternary ammonium salt into an aqueous medium. Abrasive grains are contained in at least one of the aqueous dispersion materials.